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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHU, KIM KWOK

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,654	Applicant(s) HONG ET AL.	
	Examiner Kim-Kwok CHU	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/538,748.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,625,093. Although the conflicting claims are not identical, they are not patentably distinct from each other.

3. With respect to the present claim 1, the '093 patent's claim 1 is not identical to the present claim 1 but has every limitations of the present claim 1.

4. With respect to the present dependent claims 2-13, the '093 patent has identical dependent claims 2-13.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

6. Claims 14-17 are rejected under 35 U.S.C. § 102(e) as being anticipated by Nagai et al. (U.S. Patent 5,862,112).

Nagai teaches a method of reproducing records for an optical medium having all of the steps as recited in claims 14-17. For example, Nagai teaches the following steps:

(a) as in claim 14, the optical recording medium has a plurality of non-writable areas 5 of different phases between writable data areas 6 and 7 (Figs. 9A and 9B; ID1 to ID4 are non-writable headers with opposite polarity);

(b) as in claim 14, the non-writable areas 5 contains wobbled information on a track for recognizing a reference frequency to distinguish profiles (addresses) of the data areas 6 and 7 (Figs. 9A and 9B);

(c) as in claim 14, determining a difference signal between optical reflecting signals each detected at the plural non-writable areas (ID1-ID4) of different phases to output a

variation (Fig. 3; ID reproduction circuit 602 extracts ID information; column 14, lines 44-46);

(d) as in claim 14, comparing the variation with a predetermined threshold (Fig. 4; comparator 1003 identifies the variation of the headers ID1 to ID4; track address identification; column 14, lines 22-37; comparator inherently includes a threshold as a comparing reference);

(e) as in claim 14, determining that defocus has occurred, if the variation exceeds the threshold, and outputting the resulting value (Figs. 3 and 4; track identification 901 controls focus control circuit 608; track jump is a defocus situation);

(f) as in claim 14, performing a focus servo based on the resulting value (Figs. 3 and 4; focus/tracking control circuit 608 has input signal b from track identification circuit 901);

(g) as in claim 15, in the above variation outputting step, the optical reflecting signals detected at the non-writable areas 5 include read channel 2 signals (ID2 and ID4) generated from electrical signals output in proportion to the quantity of beam reflected from the optical recording medium (Figs. 3, 4 and 9; track addresses are detected from ID3 and ID4);

(h) as in claim 16, in the above variation outputting

step, the optical reflecting signals detected at the non-writable areas 5 include read channel 1 signals (ID1 and ID3) generated from electrical signals output in proportion to the quantity of beam reflected from the optical recording medium (Figs. 3, 4 and 9; track addresses are detected from ID1 and ID3); and

(i) as in claim 17, in the above variation outputting step, a peak-to-peak voltage of read channel 1 signals (ID1 and ID3) or read channel 2 signals (ID2 and ID4) detected at the non-writable areas 5 is a first signal, and a peak-to-peak voltage of read channel 1 signals (ID1 and ID3) or read channel 2 signals (ID2 and ID4) detected at a second non-writable areas 5 is a second signal, the second non-writable areas 5 being different in phase (polarity) from the non-writable areas 5, the variation being the difference between the first signal and the second signal (Figs. 3 and 9A; signal b output in 901 is the variation signal).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 18-20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Joo et al. (U.S. Patent 6,469,979) in view of Yoshida et al. (U.S. Patent 6,097,678).

Joo teaches an apparatus for reproducing records for an optical recording medium very similar to that of the present invention. For example, Joo teaches the following:

(a) as in claim 18, the recording medium has a plurality of non-writable areas (headers) of different phases (polarity) between writable data areas containing wobbled information (ID address) on a track for recognizing a reference frequency to distinguish profiles of the data areas (Figs. 3 and 7A);

(b) as in claim 18, a signal generator 62, 64, 76 for generating a difference signal between optical reflecting signals from electrical signals generated from an optical pickup for recording/reproducing information on/from the optical recording medium (Fig. 8; reflected signals are reproduced by arithmetic sum method);

(c) as in claim 18, a detrack detector 76 for detecting detrack (land/groove) of the optical recording medium from a variation of the difference signal between the optical reflecting signals of the non-writable areas (headers) output from the signal generator 62, 64, 76 and outputting a detrack (land/groove) error signal (Fig. 8; detrack error signal is a land/groove off-track signal);

(d) as in claim 18, a tilt detector 72 for detecting tilt of the optical recording medium from a variation of the difference signal between the optical reflecting signals of the non-writable areas (headers) output from the signal generator 62, 64, 76 and outputting a tilt error signal (Fig. 8; column 7, lines 22-35);

(e) as in claim 18, a servo controller for generating a tracking driving signal 80 from the detrack error signal detected at the detrack detector 76 (Fig. 8);

(f) as in claim 18, the servo controller for generating a tilt driving signal 74 from the tilt error signal detected at the tilt detector 74 , and a focus driving signal from the defocus error signal detected at the defocus detector (Fig. 8);

(g) as in claim 18, a tracking driver for controlling the optical pickup based on the tracking driving signal to compensate for detrack (Fig. 8; detrack compensation signal provides tracking to an inherent tracking driver);

(h) as in claim 18, a tilt driver for controlling the optical pickup based on the tilt driving signal to compensate for tilt (Fig. 8; tilting compensation signal provides tilting control to an inherent tilting driver);

(i) as in claim 19, the difference signal between the optical reflecting signals includes a read channel 2 signal or a tracking error signal (Figs. 7A and 8; headers on each side of the track can be considered as two channels of signals and each channel provides off track information); and

(j) as in claim 20, the servo controller generates the tracking driving signal, the tilt driving signal, while changing each offset in such a manner that the variables detected at the detrack detector, the tilt detector decrease (Fig. 8; tilting and detrack are compensated).

However, Joo does not teach the following:

(a) as in claim 18, a defocus detector for detecting defocus of the optical recording medium from a variation of the difference signal between the optical reflecting signals of the non-writable areas output from the signal generator, and outputting a defocus error signal; and

(b) the servo controller generates a focus driving signal from the defocus error signal detected at the defocus detector.

Yoshida teaches the following:

(a) a defocus detector 12 for detecting defocus of the optical recording medium from a variation of the difference signal between the optical reflecting signals of the non-writable areas output from the signal generator, and outputting a defocus error signal (Fig. 3; the decoded prepit/header signal indicates a reflected signal can be properly read or not); and

(b) the servo controller 15 generates a focus driving signal from the defocus error signal detected at the defocus detector (Fig. 3; column 7, lines 54-56).

The headers in a non-writable area provides addresses and identification data of tracks in the land and groove regions. The headers needed to be correctly read first in order to go to the proper track. In this case, although Joo does not teach a focusing servo means such as a defocus detector and a focusing servo controller, it would have been obvious to one of ordinary skill in the art to includes focusing servo means similar to Yoshida's, because the focusing servo means controls a reproducing light beam so that it can be correctly focused on the headers.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi (6,631,114) is pertinent because Kobayashi teaches an information recording/reproducing means having header detecting means and focusing servo control means.

Sato et al. (6,418,104) is pertinent because Sato teaches an information medium having header section for generating servo signals.

Shim (6,333,902) is pertinent because Shim teaches an information recording/reproducing means having wobble signals with staggered headers.

Tanoue et al. (6,298,033) is pertinent because Tanoue teaches an information medium having header section for generating servo signals.

10. Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communications intended for entry. Or:

(571) 273-7585, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application should be directed USPTO Contact Center (703) 308-4357; Electronic Business Center (703) 305-3028.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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